Special Issue

Structural Health Monitoring Using Acoustic Emission Signals: The Role of Machine Learning

Message from the Guest Editor

Acoustic emission (structure-borne, self-generated ultrasound) has been suggested for structural monitoring for several decades. However, for applications outside the laboratory, there is a need to separate the signal of interest (e.g., that from a growing fatigue crack) from the many other sources of AE (e.g., from adjacent operating machinery) in a typical service environment. This Special Issue will bring together contributions from leaders in the fields of manufacturing, transport, civil engineering, and biomedical engineering to form a comprehensive overview of the state of the art, including case studies. Topics will include the following:

- Monitoring damage accumulation in structures made from composite materials;
- Assessments of structural integrity and structural degradation;
- Integrity in biomechanical applications;
- Machinery health monitoring;
- Signal processing and Al techniques;
- Monitoring arrays of structures and machines with high reliability

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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